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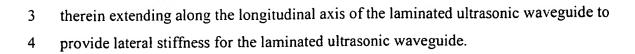
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WHAT IS CLAIMED IS:

1	1. A laminated ultrasonic waveguide comprising at least two stamped
2	pieces of sheet stock which are laminated together to form a laminated ultrasonic
3	waveguide for transferring ultrasonic acoustic energy along a longitudinal axis of the
4	laminated ultrasonic waveguide.
1 ·	2. The laminated ultrasonic waveguide of claim 1, in an ultrasonic
2	surgical instrument having an active tip end-effector which is placed in contact with
3	tissue of a patient to couple ultrasonic energy transferred along the laminated
4	ultrasonic waveguide to the tissue.
1	3. The laminated ultrasonic waveguide of claim 1, wherein the at least
2	two stamped pieces of sheet stock are stamped to form at least one channel extending
3	along the length of the laminated ultrasonic waveguide.
1	4. The laminated ultrasonic waveguide of claim 1, wherein the
2	laminated ultrasonic waveguide defines a connector at a proximal end of the laminated
3	ultrasonic waveguide to transfer ultrasonic energy to the laminated ultrasonic
4	waveguide.
1	5. The laminated ultrasonic waveguide of claim 1, comprising first and
2	second stamped half pieces of sheet stock which are laminated together, wherein each
3	of the stamped first and second half pieces of sheet stock defines half of a cylindrical
4	connector at a proximal end of the laminated ultrasonic waveguide which has threads
5	stamped into an interior surface of each half cylindrical connector, such that the first
6	and second half pieces define a cylindrical connector having threads on the interior
7	surface thereof for providing a threaded connector to the laminated ultrasonic
8	waveguide.

portion of each of the stamped pieces of sheet stock has a longitudinal rib stamped

6. The laminated ultrasonic waveguide of claim 1, wherein a distal



- 7. The laminated ultrasonic waveguide of claim 1, wherein the ultrasonic waveguide comprises first outer, second inner and third outer stamped pieces of sheet stock which are laminated together, wherein each of the first, second and third stamped pieces of sheet stock defines a portion of a cylindrical connector at a proximal end of the laminated ultrasonic waveguide which has threads stamped into an interior surface of the cylindrical connector, such that the first, second and third stamped pieces define the cylindrical connector having threads stamped into the interior surface of the cylindrical connector for providing a threaded connector to the laminated ultrasonic waveguide.
- 8. The laminated ultrasonic waveguide of claim 7, wherein the first and third outer laminated pieces of sheet stock extend from the proximal end of the ultrasonic waveguide for a portion of the length of the ultrasonic waveguide, and the second inner laminated piece of sheet stock extends for at least a portion of the length of the ultrasonic waveguide.
- 9. The laminated ultrasonic waveguide of claim 8, wherein the second inner laminated piece of sheet stock extends to a distal active tip end of the laminated ultrasonic waveguide.
- 1 10. The laminated ultrasonic waveguide of claim 9, wherein the second 2 inner laminated piece forms an end-effector at the distal end of the ultrasonic 3 laminated waveguide.
 - 11. The ultrasonic waveguide of claim 1, wherein a piece of sheet stock is mounted and secured to longitudinally extending slots in an outer circumference of a separate threaded connector.

1	12. A method of fabricating a laminated ultrasonic waveguide
2	comprising stamping and forming at least two stamped pieces of sheet stock to form
3	parts of the body of the laminated ultrasonic waveguide, and laminating together the at
4	least two stamped pieces of sheet stock to form the body of the laminated ultrasonic
5	waveguide.
1	13. The method of claim 12, further comprising fabricating an
2	ultrasonic surgical instrument comprising an active tip end-effector which is placed in
3	contact with tissue of a patient to couple ultrasonic energy transferred along the
4	longitudinal axis of the laminated ultrasonic waveguide to the tissue.
1	14. The method of claim 12, including stamping the at least two
2	stamped pieces of sheet stock to form at least one channel extending along a length of
3	the laminated ultrasonic waveguide.
1	15. The method of claim 12, further comprising defining a connector at
2	a proximal end of the laminated ultrasonic waveguide to transfer ultrasonic energy to
3	the laminated ultrasonic waveguide.
1	16. The method of claim 12, including stamping and forming first and
2	second half pieces of sheet stock while defining in each of the stamped first and
3	second half pieces of sheet stock half of a cylindrical connector at a proximal end of
4	the laminated ultrasonic waveguide by stamping threads into an interior surface of
5	each half of the cylindrical connector, such that the first and second half pieces define
5	a cylindrical connector having threads on the interior surface thereof for providing a
7	threaded connector to the laminated ultrasonic waveguide.
l	17. The method of claim 12, including stamping and forming a
2	longitudinal rib in a distal portion of each of the stamped pieces of sheet stock which
3	extends along a longitudinal axis of the laminated ultrasonic waveguide to provide
Į.	lateral stiffness for the laminated ultrasonic waveguide

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threaded connector.

1	18. The method of claim 12, including stamping and forming first
2	outer, second inner and third outer stamped pieces of sheet stock while defining in
3	each of the first, second and third stamped pieces of sheet metal a portion of a
4	cylindrical connector at a proximal end of the laminated ultrasonic waveguide by
5	stamping threads into an interior surface of the cylindrical connector, such that the
6	first, second and third stamped pieces define the cylindrical connector having threads
7	stamped into the interior surface of the cylindrical connector for providing a threaded
8	connector to the ultrasonic waveguide.
1	19. The method of fabricating an ultrasonic surgical instrument of
2	claim 17, including stamping and forming the first and third outer laminated pieces of
3	sheet stock to extend from the proximal end of the laminated ultrasonic waveguide for
4	a portion of the length of the laminated ultrasonic waveguide, and stamping and
.5	forming the second inner laminated piece of sheet stock to extend for at least a portion
6	of the length of the laminated ultrasonic waveguide.
1	20. The method of claim 19, including forming the second inner
2	laminated piece of sheet stock to extend to a distal tip end of the laminated ultrasonic
3	waveguide.
1	21. The method of claim 20, including stamping and forming the
2	second inner laminated piece with an end-effector tip at the distal end of the laminated
3	ultrasonic waveguide.
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of sheet stock to longitudinally extending slots in an outer circumference of a separate

22. The method of claim 12, including mounting and securing a piece